

CYSTIC OVARIAN DEGENERATION LESSON-2

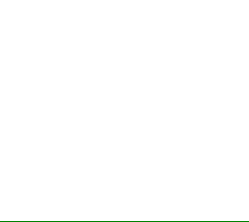
Presented by

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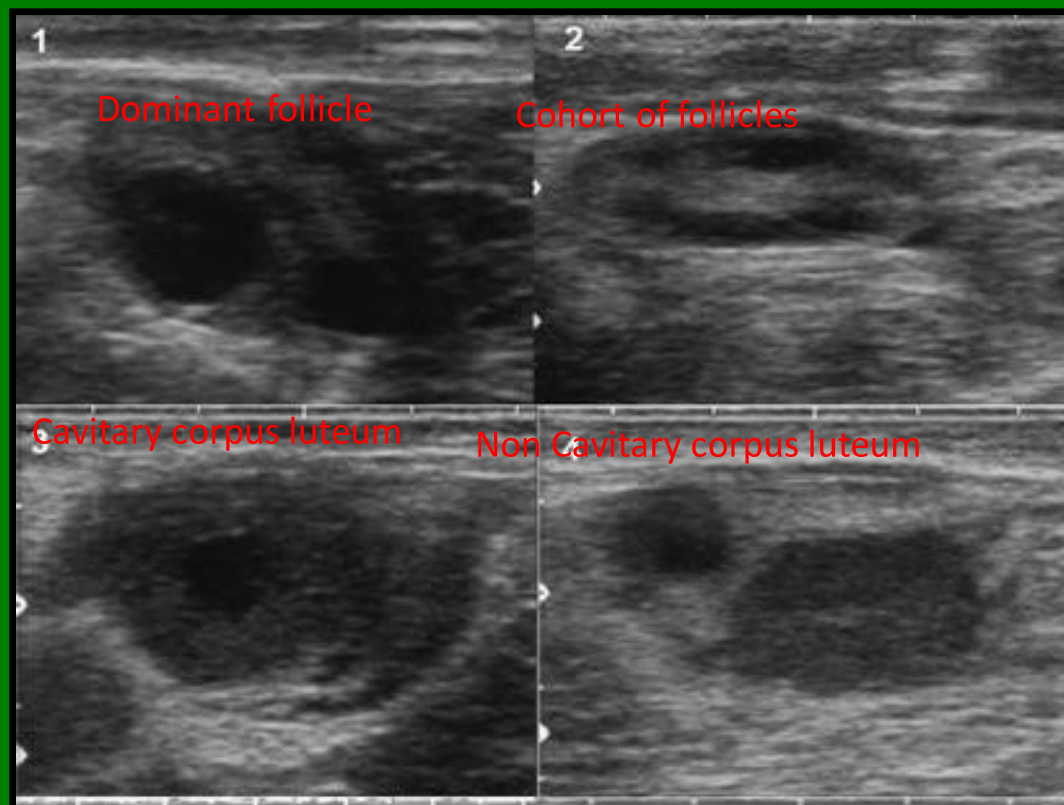
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Objectives- Lesson II

- Ultrasonographic images of normal ovarian structures
- Classification of cystic ovaries
- Mechanism of cyst formation
- Signs and symptoms



Ultrasonographic images of normal ovarian structures





Classification of cystic ovaries

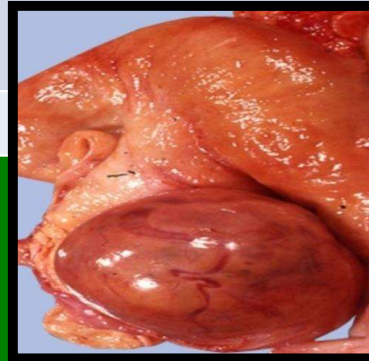
Follicular Cyst

- One or more than one thin walled anovulatory follicles and greater than 2.5 cm in diameter with fluid filled cavity
- Persists for 10 or more days in the absence of a functional CL
- Accompanied by either nymphomania or frequent estrus



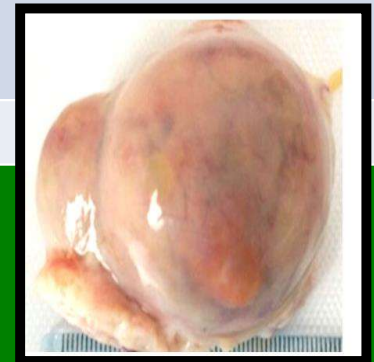
Luteal Cyst

- Thick walled, partially luteinized anovulatory follicles, more than 2.5 cm in diameter
- Persists for a prolonged period
- Characterized by anoestrus



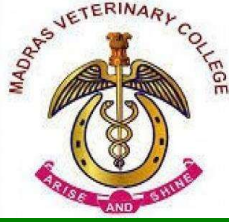
Cystic Corpora Lutea

- Non-pathological CL containing greater than 7 mm fluid filled central cavity with distinct ovulation papilla.
- Produces sufficient concentration of progesterone (7-8ng/ml) to maintain pregnancy
- 100 mcg of P4 – Supports pregnancy
- Often slightly fluctuating soft consistency





Mechanism of cyst formation

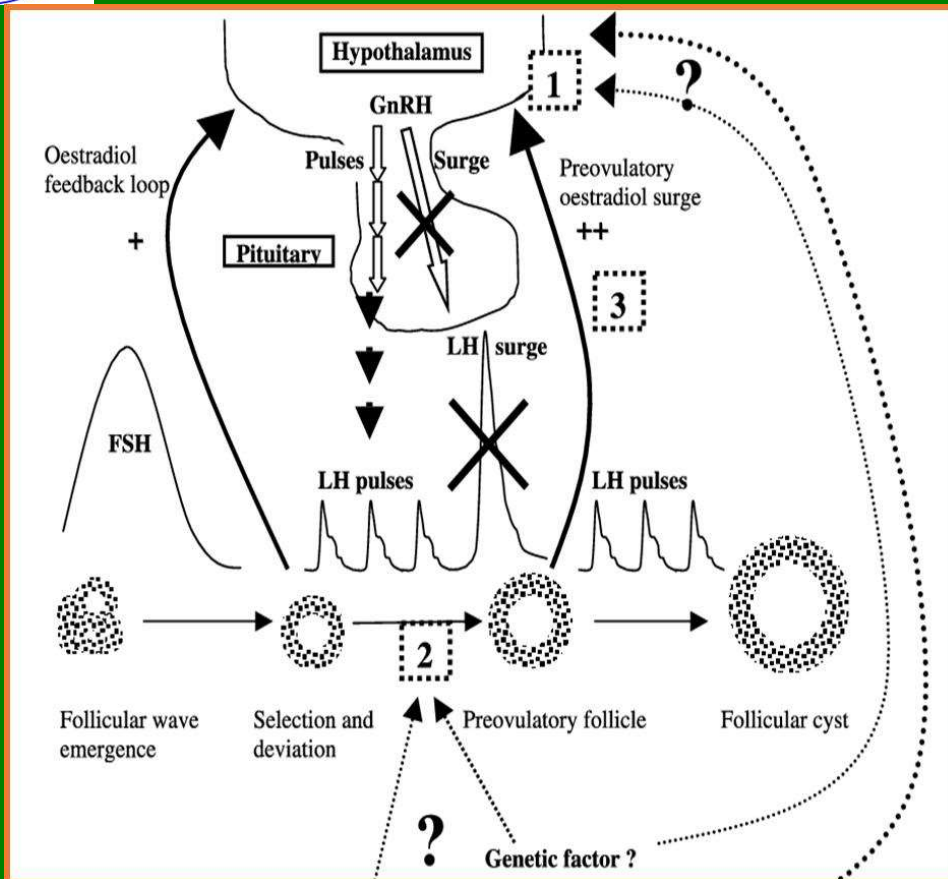


- ❖ In spite of many research, the exact mechanism of COD is unclear
- ❖ Generally accepted mechanism is disruption of Hypothalamo- Pituitary-Gonadal axis
 - A. Intrinsic factors
 - B. Extrinsic factors



Mechanism of cyst formation

A. Intrinsic factors



Fails to elicit or mistimed/delayed GnRH/LH surge

at the hypothalamic-pituitary level



Dominant follicle not ovulate



Grow continuously/Aberrant follicle growth



Alterations in receptor expression and

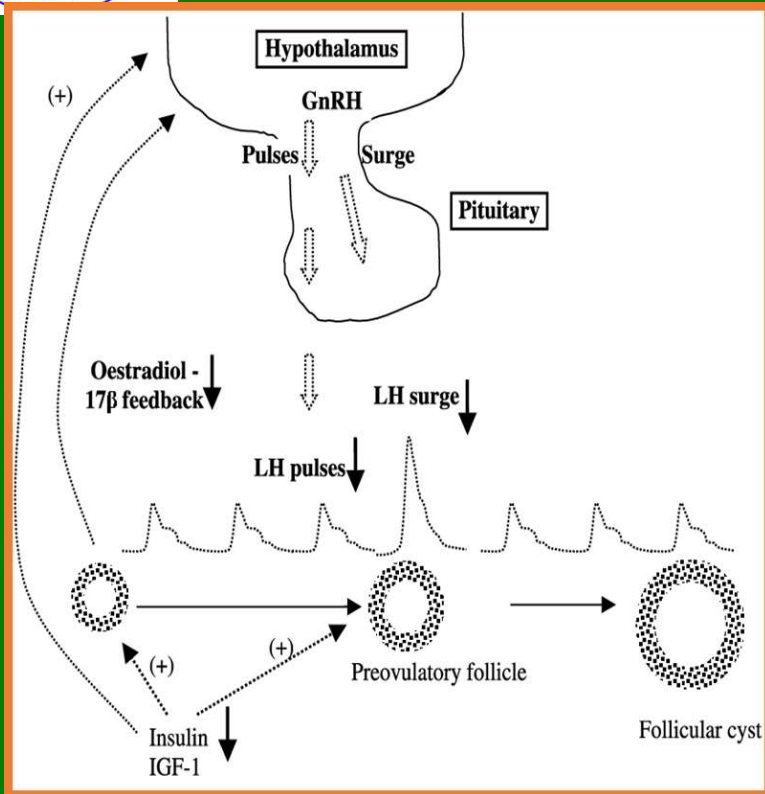
steroidogenesis



Becomes a cyst



B. Extrinsic factors

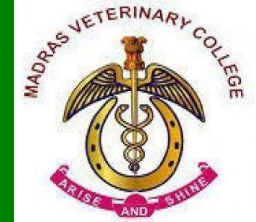


- Low insulin/IGF-1 concentrations → Low follicle cell proliferation Low oestradiol-17 β production
- Reduced oestradiol-17 β feedback → Reduced gonadotropin release
- Retarded dominant follicle growth and pattern with oestradiol-17 β production → Disrupt the hypothalamo-pituitary-gonadal axis Development of cystic follicle



Signs and symptoms

Follicular cyst



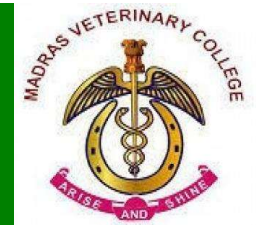
Nymphomania:

- Frequent, irregular, prolonged or continuous signs of estrus
- Often nervous, restless and bellow frequently
- Frequently attempt to ride other cows but refuse to stand to be ridden
- Aggravated homosexual characteristics (**Bullers**)
- Uterus and cervix – large, dematous and flaccid
- Cervical canal- dilated and relaxed, permitting a finger or pencil to pass through.
- Endometrium - smooth , moist, semi-transparent and edematous
- Vagina, clitoris and vulva - swollen





Signs and symptoms Follicular cyst...



Sterility hump:

- Excess relaxation of the pelvic ligament leads to tipping of pelvis and elevation of tail head.
- In long standing cases of Nymphomania, tipping of pelvis is very common
- Ligaments fail to regain their tone even after recovery and conception
- Tipping of the pelvis may result in an unsteady gait and predispose to injuries





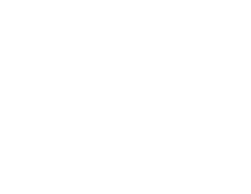
Signs and symptoms Follicular cyst...



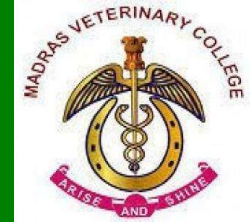
Adrenal virilism:

- Commonly observed in chronic follicular cyst cases
- Exhibit a muscular behaviour and appearance
- Increased level of 17β Keto Steroids in urine from the adrenal gland
- Masculinization of head and neck
(Steer-like appearance)





Signs and symptoms Follicular cyst...



Mucometra/Hydrometra:

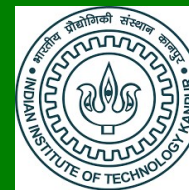
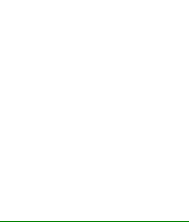
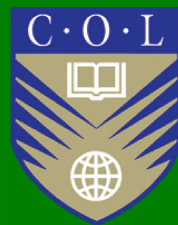
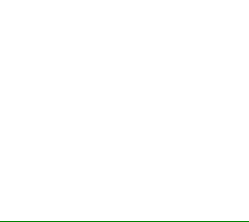
- Often noticed in long standing cases
- Hyperplasia of the mucosa
- Cystic dilatation of the endometrial glands
- Marked cystic dilatation develops a typical Swiss cheese appearance
- Uterus accumulated with 100-1000 cc of watery mucus
- Affects single horn/ portion of the horn
- If infection occurs, may lead to pyometra



So far we discussed....

- Ultrasonographic images of normal ovarian structures
- Classification of cystic ovaries
- Mechanism of cyst formation
 - A. Extrinsic factors
 - B. Intrinsic factors
- Signs and symptoms
 - ❖ Nymphomania
 - ❖ Sterility hump
 - ❖ Adrenal Virilism
 - ❖ Mucometra/ Hydrometra

Thank You



Thank you

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